

## Bill of materials

**Table 1. STDES-SICGPHU3 bill of materials**

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
1	1	C1	Multi-Footprint Foil Capacitor	Foil capacitor		
2	8	C2, C3, C4, C7, C8, C22, C25, C27	Ceramic capacitor 1.2kV	Ceramic capacitor		
3	2	C5, C6	25uF / 1.2kV	Foil capacitor	Würth Elektronik	890744429002CS
4	2	C11, C12	CAP CER 0805 50V 270p	Ceramic capacitor		
5	6	J1, J2, J3, J4, J5, J6	THRBU REDCUBE M5	REDCUBE terminal	Würth Elektronik	74655095
6	2	J7, J9	SMA	SMA_PCB THT Jack Right Angle	Würth Elektronik	60311002111526
7	2	J8, J10	2.54mm 2pin	Male header 2.54mm		
8	1	J11	2.54mm 4pin	Male header 2.54mm		
9	1	P2	CON PCB TERMINAL 2-pole 5mm	Socket	Würth Elektronik	691213710002
10	1	P3	CON MMCX SMD STRAIGHT PLUG	MMCX Connector	Amphenol	908-NM22109
11	2	Q1, Q2	SiC NMOS HU3PAK	N channel SiC MOSFET	ST	
12	1	R13	SSDN-414 Coaxial CVR	Coaxial shunt	Billmann Engineering	
13	2	R17, R18	RES 0805 10k 250mW 1%	Resistor		
14	1	R22	RES 2818 20mR 10W 1%	Resistor	Vishay	WSHP2818R0200FEB
15	7	TP2, TP3, TP4, TP5, TP6, TP7, TP8	Testpoint	Test point		
16	2	U1, U2	Gate driver module	Sub board		

**Table 2. STDES-SICGPHU3D - gate driver - bill of materials**

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
1	2	C1, C8	33p	Ceramic capacitor		
2	4	C2, C5, C6, C7	100n	Ceramic capacitor		
3	1	C3	330n	Ceramic capacitor		
4	1	C4	100n	Ceramic capacitor		
5	2	C9, C10	1u	Ceramic capacitor		
6	1	D1	STPS1L40ZF, SOD123Flat	Diode	ST	STPS1L40ZF
7	1	J1	Jumper	PCB Jumper		
8	1	P1	Control	PCB connector		
9	1	P2	Power	PCB connector		
10	1	P3	DC/DC Prim.	Header 2.54 4pin x 1		
11	1	P4	Output	PCB connector		
12	1	P5	DC/DC Sec.	Header 2.54 3pin x 1		

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
13	1	P6	Header 2x1	Header 2.54 2pin x 2		
14	2	R1, R2	270R	Resistor		
15	2	R3, R7	NA	Resistor		
16	1	R4	0R	Resistor		
17	2	R5, R6	10R	Resistor		
18	1	U3	STGAP2SICSCTR, SO 8 WIDE 300	Isolated Driver	ST	STGAP2SICSCTR
19	1	U4	L78L33ABUTR, SOT-89	Linear Regulator	ST	L78L33ABUTR

**Table 3. STDES-SICGPHU3D - fly-buck module - bill of materials**

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
1	2	C1, C6	CAP CER 0805 1uF 50V X7R 10%	Ceramic capacitor		
2	2	C2, C8	CAP CER 270p 0603 50V C0G 10%	Ceramic capacitor		
3	2	C3, C10	CAP CER 0805 2.2uF 50V X7R 10%	Ceramic capacitor		
4	2	C4, C9	CAP CER 10uF 35V 1206 X7R 10%	Ceramic capacitor		
5	1	C5	CAP CER 100nF 50V 1206 X7R 10%	Ceramic capacitor		
6	1	C7	CAP CER 680pF 50V 0603 C0G 10%	Ceramic capacitor		
7	1	C11	CAP CER 470nF 50V 0603 X7R 10%	Ceramic capacitor		
8	1	C12	CAP CER 68nF 50V 0603 X7R 10%	Ceramic capacitor		
9	1	C13	CAP CER 10pF 50V 0603 C0G 10%	Ceramic capacitor		
10	2	D1, D2	STPS1H100MF, STmiteFLAT	Schottky	ST	STPS1H100MF
11	1	P1	CON SOCK 2.54mm 4pin 1row	Header Receptacle 4 pins 1 row		
12	1	P2	CON SOCK 2.54mm 3pin 1row	Header Receptacle 3 pins 1 row		
13	2	Q1, Q2	BC817-40	NPN Transistor		
14	1	R1	RES 910R 0805 125mW 1%	Resistor		
15	1	R2	RES 15k 0603 100mW 1%	Resistor		
16	1	R3	RES 2.4k 0805 125mW 1%	Resistor		
17	1	R4	RES 1.2k 0805 125mW 1%	Resistor		
18	1	R5	RES 120k 0603 100mW 1%	Resistor		
19	1	R6	RES 2k4 0603 100mW 1%	Resistor		
20	1	R7	RES 6.8k 0603 100mW 1%	Resistor		
21	1	R8	RES 56k 0603 100mW 1%	Resistor		
22	1	R9	RES 12k 0603 100mW 1%	Resistor		
23	1	TR1	WE-AGDT Gate Drive Transformer	Transformer	Würth Elektronik	750317894
24	2	U1, U2	TL431, SOT23	Shunt voltage reference	ST	TL431ACL3T
25	1	U3	L6986I, HTSSOP16	38 V, 5 W synchronous iso-buck controller	ST	L6986ITR

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